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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,872	10/28/2003	Nigel J. Renton	03-6171	4103
63710 7590 03/02/2011 INNOVATION DIVISION CANTOR FITZGERALD, L.P. 110 EAST 59TH STREET (6TH FLOOR) NEW YORK, NY 10022				
EXAMINER KANG, IRINE S				
ART UNIT 3695		PAPER NUMBER		
MAIL DATE 03/02/2011		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/694,872

**Applicant(s)**

RENTON ET AL.

**Examiner**

IRENE KANG

**Art Unit**

3695

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 November 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 128-183 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 128-183 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-940)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 01/08/2010, 10/27/2010, 11/10/2010
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

The following is a Final Office Action in response to communications received November 19, 2010. Claims 1-127 have been cancelled. New claims 128-183 have been added. Claims 128-183 remain pending and examined.

### **Response to Arguments**

As to the provisional rejection of claims 1 (1-7 and 9-19), 20 (20-23), 25 (25-31), 32 (32-35 and 37-43), 44 (44-47), 49 (49-55 and 57-67), 68 (68-71), 73 (73-79), 80 (80-83 and 85-91), 92 (92-95), 97 (97-117), 118, 119, 120, 121, 122, and 123 on the ground of nonstatutory obviousness-type double patenting, Applicant's arguments are moot given that these claims have been cancelled.

As to the rejection of claims 32-35, 37-43, 80-83, and 85-91 under 35 U.S.C. § 101, Applicant's arguments are moot given that these claims have been cancelled.

As to the rejection of claims 98-116 under 35 U.S.C. § 112, Applicant's arguments are moot given that these claims have been cancelled.

As to the rejection of claims 1-7, 9-23, 25-35, 37-47, 49-55, 57-71, 73-83, 85-95, and 97-123 under 35 U.S.C. § 103, Applicant's arguments are moot given new grounds of rejection for the claims as amended.

### **Claim Rejections - 35 USC § 112**

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 128, 129, 132, 135, 137, 142, 144, 151, 152, 154-159, 163, 170, 171, 174, 175, 178, 181, 182, and 183** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation of determining by a computer of an electronic trading system as to whether an order to trade an instrument is placed by a market-maker is new matter.

**Claims 128, 133, 138, 153, 156, 164, 176, and 177** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation of computing by a computer of an electronic trading system of brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side is new matter.

**Claim 140** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described

in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation of on cancellation of the order to which the other order' s price is adjusted, returning the price of the adjusted-price order to its pre-adjustment price is new matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claim 146** rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "without substantial delay" in claim 146 is a relative term which renders the claim indefinite. The term "substantial" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 129-132, 134-137, 139-141, 144, 146, 148-152, 154, 155, 157-163, 165-175**

rejected under 35 U.S.C. 102(e) as being anticipated by the patent to Gary Katz (Patent No.: US 7,246,093).

**As to Claim 129**, Katz teaches a method, comprising the steps of: by a computer of an electronic trading system, evaluating orders to trade an instrument to determine whether the orders are placed by market-makers, and evaluating received orders to determine whether a bid to buy order for the instrument crosses price with an offer to sell order for the instrument (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; and Col. 10, line 62 through Col. 11, line 47);

based on a determination by a computer of the electronic trading system that a price of a bid to buy order crosses the price of an offer to sell order, and that the crossed orders are each from market makers, automatically taking at least one of the following actions (see at least Col. 9, line 9 through Col. 10, line 10; and Col. 10, line 62 through Col. 11, line 47):

(a) adjusting a price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and publishing the adjusted price order to the market for execution by non-market makers while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18);

(b) adjusting the price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and executing the adjusted price order against any

matching orders from non-market maker traders, while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18);

(c) starting a timer delaying execution of the crossed market maker orders against each other for a period of time, and if the crossed market maker orders remain matching or crossed at expiry of the timer, automatically executing the two market maker orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; and Col. 10, line 62 through Col. 11, line 47).

**As to Claim 130**, Katz teaches the step of:

adjusting a price of at least one of the crossed market maker orders to match the price of the other crossed market maker order (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 131**, Katz teaches the step of:

executing the adjusted price order against any matching orders from non-market maker traders, while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; and Col. 10, line 62 through Col. 11, line 47).

**As to Claim 132**, Katz teaches the step of: based at least in part on a determination by a computer of the electronic trading system that a price of a bid to buy order crosses the price of an offer to sell order, handling the crossed orders:

(a) if the evaluation determined that both crossed orders are from market makers or that both crossed orders are from non-market makers, executing a trade between the crossed orders at the price of the later order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26);

(b) if the evaluation determined that the later crossed order is from a market maker and the earlier crossed order is from a non-market-maker, executing a trade between the crossed orders at the price of the earlier non-market-maker order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26).

**As to Claim 134**, Katz teaches the step of:

executing the adjusted price order against any matching orders from non-market maker traders, while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 135**, Katz teaches the step of: based at least in part on a determination by a computer of the electronic trading system that a price of a bid to buy order crosses the price of an offer to sell order, handling the crossed orders:

(a) if the evaluation determined that both crossed orders are from market makers or that both crossed orders are from non-market makers, executing a trade between the crossed orders at the price of the later order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26);

(b) if the evaluation determined that the later crossed order is from a market maker and the earlier crossed order is from a non-market-maker, executing a trade between the crossed orders at the price of the earlier non-market-maker order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26).

**As to Claim 136**, Katz teaches wherein:



the adjusting of price is a change of the price of the earlier of the crossed market maker orders to match the price of the later of the crossed market maker orders (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 137**, Katz teaches the step of: based at least in part on a determination by a computer of the electronic trading system that a price of a bid to buy order crosses the price of an offer to sell order, handling the crossed orders:

(a) if the evaluation determined that both crossed orders are from market makers or that both crossed orders are from non-market makers, executing a trade between the crossed orders at the price of the later order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26);

(b) if the evaluation determined that the later crossed order is from a market maker and the earlier crossed order is from a non-market-maker, executing a trade between the crossed orders at the price of the earlier non-market-maker order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26).

**As to Claim 139**, Katz teaches the step of: assigning a new priority time stamp to the order whose price is adjusted (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26 – the adjusted price is entered as a new quotation which is given a new time stamp).

**As to Claim 140**, Katz teaches the step of: starting a timer delaying execution of the crossed market maker orders against each other for a period of time, and if the crossed market maker orders remain matching or crossed at expiry of the timer, automatically executing the two

market maker orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; and Col. 10, line 62 through Col. 11, line 47).

**As to Claim 141**, Katz teaches the step of: based at least in part on a determination by a computer of the electronic trading system that a price of a bid to buy order crosses the price of an offer to sell order, handling the crossed orders:

(a) if the evaluation determined that both crossed orders are from market makers or that both crossed orders are from non-market makers, executing a trade between the crossed orders at the price of the later order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26);

(b) if the evaluation determined that the later crossed order is from a market maker and the earlier crossed order is from a non-market-maker, executing a trade between the crossed orders at the price of the earlier non-market-maker order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26).

**As to Claim 144**, Katz teaches the step of: based on a determination by a computer of the electronic trading system that a price of a bid crosses the price of an offer, and that the crossed orders are each from market makers, automatically taking at least one of the following actions:

(a) adjusting a price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and publishing the adjusted price order to the market for execution by non-market makers while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18); or

(b) adjusting the price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and executing the adjusted price order against any matching orders from non-market maker traders, while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 146**, Katz teaches the step of: if, before the timer expires, an order is received at the electronic trading system from a non-market-maker customer at a price executable against either of the crossed non-market-maker orders, executing the non-market-maker order against the executable market maker order without substantial delay (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 148**, Katz teaches wherein:

the duration of the timer varies by instrument traded on the electronic trading system (see at least Col. 9, lines 9-29).

**As to Claim 149**, Katz teaches wherein:

the duration of the timer varies with market volatility in the instrument (see at least Col. 9, lines 9-29).

**As to Claim 150**, Katz teaches wherein:

the duration of the timer varies with one or more of current price level and average trading volume (see at least Col. 9, lines 9-29).

**As to Claim 151**, Katz teaches the step of: based on a determination by a computer of the electronic trading system that a price of a bid to buy order locks or crosses the price of an offer to

sell order, and that the locked or crossed orders are each from market makers, starting a timer delaying execution of the locked or crossed market maker orders against each other for a period of time (see at least Col. 9, line 9 through Col. 10, line 10; and Col. 10, line 62 through Col. 11, line 47); and

if the crossed market maker orders remain matching at expiry of the timer, automatically executing the two market maker orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 152**, Katz teaches the step of: based at least in part on a determination by a computer of the electronic trading system that a price of a bid to buy order crosses the price of an offer to sell order, handling the crossed orders:

(a) if the evaluation determined that both crossed orders are from market makers or that both crossed orders are from non-market makers, executing a trade between the crossed orders at the price of the later order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26);

(b) if the evaluation determined that the later crossed order is from a market maker and the earlier crossed order is from a non-market-maker, executing a trade between the crossed orders at the price of the earlier non-market-maker order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26).

**As to Claim 154**, Katz teaches a method, comprising the steps of: by a computer of an electronic trading system, evaluating orders to trade an instrument to determine whether the orders are placed by market-makers, and evaluating received orders to determine whether a bid

to buy order for the instrument locks or crosses price with an offer to sell order for the instrument (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; and Col. 10, line 62 through Col. 11, line 47); and

based on a determination by a computer of the electronic trading system that a price of a bid to buy order locks or crosses the price of an offer to sell order, and that the locked or crossed orders are each from market makers, starting a timer delaying execution of the locked or crossed market maker orders against each other for a period of time (see at least Col. 9, line 9 through Col. 10, line 10; and Col. 10, line 62 through Col. 11, line 47); and

if the crossed market maker orders remain matching at expiry of the timer, automatically executing the two market maker orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 155**, Katz teaches the step of: based on a determination by a computer of the electronic trading system that a price of a bid crosses the price of an offer, and that the crossed orders are each from market makers, automatically taking at least one of the following actions:

(a) adjusting a price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and publishing the adjusted price order to the market for execution by non-market makers while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18);

(b) adjusting the price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and executing the adjusted price order against any matching orders from non-market maker traders, while not executing the market makers' orders

against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18);

(c) starting a timer delaying execution of the crossed market maker orders against each other for a period of time, and if the crossed market maker orders remain matching or crossed at expiry of the timer, automatically executing the two market maker orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 157**, Katz teaches the step of:

based on a determination by a computer of the electronic trading system that a price of a bid crosses the price of an offer, and that the crossed orders are each from market makers, automatically adjusting a price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and publishing the adjusted price order to the market for execution by non-market makers while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 158**, Katz teaches the step of: based on a determination by a computer of the electronic trading system that a price of a bid crosses the price of an offer, and that the crossed orders are each from market makers, automatically adjusting the price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and executing the adjusted price order against any matching orders from non-market maker traders, while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 159**, Katz teaches the step of: based on a determination by a computer of the electronic trading system that a price of a bid crosses the price of an offer, and that the crossed orders are each from market makers, automatically starting a timer delaying execution of the crossed market maker orders against each other for a period of time, and if the crossed market maker orders remain matching or crossed at expiry of the timer, automatically executing the two market maker orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 160**, Katz teaches the step of: during the period of the timer, automatically comparing the crossed market maker orders against orders from non-market maker traders, and if a non-market maker order matches one of the crossed market maker orders, and automatically executing a trade between the matching non- market maker order and the matched crossed market maker order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26).

**As to Claim 161**, Katz teaches the step of: after executing the trade between the matching non-market maker order and the matched crossed market maker order, executing any remainder of the crossed market maker orders against each other without awaiting expiry of the timer (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 162**, Katz teaches the step of: during the period of the timer, if any further market maker order is received at a price at which market makers lock, automatically executing orders at the locked price, without waiting expiry of the timer (see at least Col. 6, line 64 through

Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 163**, Katz teaches the step of: based at least in part on a determination by a computer of the electronic trading system that a price of a bid to buy order crosses the price of an offer to sell order, handling the crossed orders:

(a) if the evaluation determined that both crossed orders are from market makers or that both crossed orders are from non-market makers, executing a trade between the crossed orders at the price of the later order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26); and

(b) if the evaluation determined that the later crossed order is from a market maker and the earlier crossed order is from a non-market-maker, executing a trade between the crossed orders at the price of the earlier non-market-maker order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26).

**As to Claim 165**, Katz teaches wherein:

the electronic trading system maintains one timer per instrument traded (see at least Col. 9, lines 9-29).

**As to Claim 166**, Katz teaches wherein:

the electronic trading system is programmed to cancel the automatic execution if either crossed market maker order is cancelled or if the price is changed (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26).



**As to Claim 167**, Katz teaches wherein:

the electronic trading system is programmed to vary the period of time for the timer based on market volatility (see at least Col. 9, lines 9-29).

**As to Claim 168**, Katz teaches wherein:

the electronic trading system is programmed to trade multiple instruments, and is programmed to vary the period of time for the timer based on the instrument (see at least Col. 9, lines 9-29).

**As to Claim 169**, Katz teaches wherein:

the electronic trading system is programmed to vary the period of time for the timer based on one or more of current price and average trading volume (see at least Col. 9, lines 9-29).

**As to Claim 170**, Katz teaches a method, comprising the steps of: by a computer of an electronic trading system, evaluating orders to trade an instrument to determine whether the orders are placed by market-makers, and evaluating received orders to determine whether a bid to buy order for the instrument crosses price with an offer to sell order for the instrument (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; and Col. 10, line 62 through Col. 11, line 47);

based at least in part on a determination by a computer of the electronic trading system that a price of a bid to buy order crosses the price of an offer to sell order, handling the crossed orders (see at least Col. 9, line 9 through Col. 10, line 10; and Col. 10, line 62 through Col. 11, line 47);

(a) if the evaluation determined that both crossed orders are from market makers or that both crossed orders are from non-market makers, executing a trade between the crossed orders at the price of the later order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26);

(b) if the evaluation determined that the later crossed order is from a market maker and the earlier crossed order is from a non-market-maker, executing a trade between the crossed orders at the price of the earlier non-market-maker order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26).

**As to Claim 171**, Katz teaches the step of: based on a determination by a computer of the electronic trading system that a price of a bid to buy order crosses the price of an offer to sell order, and that the crossed orders are each from market makers, automatically taking at least one of the following actions (see at least Col. 9, line 9 through Col. 10, line 10; and Col. 10, line 62 through Col. 11, line 47):

(a) adjusting a price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and publishing the adjusted price order to the market for execution by non-market makers while not executing the market makers' orders against each other;

(b) adjusting the price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and executing the adjusted price order against any matching orders from non-market maker traders, while not executing the market makers' orders

against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18); and

(c) starting a timer delaying execution of the crossed market maker orders against each other for a period of time, and if the crossed market maker orders remain matching or crossed at expiry of the timer, automatically executing the two market maker orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 172**, Katz teaches the step of: adjusting a price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and publishing the adjusted price order to the market for execution by non-market makers while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 173**, Katz teaches the step of: adjusting the price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and executing the adjusted price order against any matching orders from non-market maker traders, while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18);

**As to Claim 174**, Katz teaches the step of: based on a determination by a computer of the electronic trading system that a price of a bid crosses the price of an offer, and that the crossed bid and offer orders are each from market makers, automatically starting a timer delaying execution of the crossed market maker orders against each other for a period of time, and if the crossed market maker orders remain matching or crossed at expiry of the timer, automatically

executing the two market maker orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 175**, Katz teaches the step of: based on a determination by a computer of the electronic trading system that a price of a bid to buy order locks or crosses the price of an offer to sell order, and that the locked or crossed orders are each from market makers, starting a timer delaying execution of the locked or crossed market maker orders against each other for a period of time (see at least Col. 9, line 9 through Col. 10, line 10; and Col. 10, line 62 through Col. 11, line 47); and

if the crossed market maker orders remain matching at expiry of the timer, automatically executing the two market maker orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; and Col. 10, line 62 through Col. 11, line 47).

**Claim 177** is rejected under 35 U.S.C. 102(e) as being anticipated by the patent to Fraser et al. (Patent No.: US 7,392,214).

**As to Claim 177**, Fraser teaches by computer of an electronic trading system, computing brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side (see at least Col. 10, lines 11-35).

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 128, 133, 138, 140, 143, 145, 147, 153, 156, 164, 166, 168, 176, and 178-183** are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent to Gary Katz (Patent No.: US 7,246,093), and further in view of the patent to Fraser et al. (Patent No.: US 7,392,214).

**As to Claim 128**, Katz teaches a method, comprising the steps of: by a computer of an electronic trading system, evaluating orders to trade an instrument to determine whether the orders are placed by market-makers, and evaluating received orders to determine whether a bid to buy order for the instrument crosses price with an offer to sell order for the instrument (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; and Col. 10, line 62 through Col. 11, line 47);

(1) based on a determination by a computer of the electronic trading system that a price of a bid to buy order crosses the price of an offer to sell order, and that the crossed orders are each from market makers, starting a timer delaying execution of the crossed market maker orders against each other for a period of time, and automatically taking at least one of the following actions (a), (b) or (c) (see at least Col. 9, line 9 through Col. 10, line 10; and Col. 10, line 62 through Col. 11, line 47):

(a) adjusting a price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and publishing the adjusted price order to the market for execution by non-market makers while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18);

(b) adjusting the price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and executing the adjusted price order against any matching orders from non-market maker traders, while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18);

(c) starting a timer delaying execution of the crossed market maker orders against each other for a period of time, and if the crossed market maker orders remain matching or crossed at expiry of the timer, automatically executing the two market maker orders against each other at the price of the later order (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18);

(2) if the evaluation determined that the later crossed order is from a market maker and the earlier crossed order is from a non-market-maker, executing a trade between the crossed orders at the price of the earlier non-market-maker order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26).

Although Katz substantially teaches the invention of Claim 128, it does not explicitly teach (3) by computer of an electronic trading system, computing brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side. Fraser does teach by computer of an electronic trading system, computing brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side (see at least Col. 10, lines 11-35). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the features of Fraser with those of Katz as both inventions pertain to managing electronic auction trading of financial assets and the features of Fraser would provide incentive to market makers to bring liquidity to the market.

**As to Claim 133**, although Katz substantially teaches the invention of Claim 133, it does not explicitly teach the step of: by computer of the electronic trading system, computing brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee

computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side. Fraser does teach the step of: by computer of the electronic trading system, computing brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side (see at least Col. 10, lines 11-35). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the features of Fraser with those of Katz as both inventions pertain to managing electronic auction trading of financial assets and the features of Fraser would provide incentive to market makers to bring liquidity to the market.

**As to Claim 138**, although Katz substantially teaches the invention of Claim 138, it does not explicitly teach the step of: by computer of the electronic trading system, computing brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side. Fraser does teach the step of: by computer of the electronic trading system, computing brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side (see at least Col. 10, lines 11-35). It would have been obvious to one of ordinary skill in the art at



the time of the invention to incorporate the features of Fraser with those of Katz as both inventions pertain to managing electronic auction trading of financial assets and the features of Fraser would provide incentive to market makers to bring liquidity to the market.

**As to Claim 140**, Fraser teaches the step of:

on cancellation of the order to which the other order's price is adjusted, returning the price of the adjusted-price order to its pre-adjustment price (see at least Col. 13, lines 6-48).

**As to Claim 143**, Fraser teaches the step of:

canceling the automatic execution if the price of either the crossed or matching market maker orders is moved to be no longer be crossed or matching before the timer expires (see at least Col. 13, lines 6-48).

**As to Claim 145**, Fraser teaches the step of:

canceling the automatic execution if, before the timer expires, an order is received at the electronic trading system from a non-market-maker customer, the price of the non-market-maker order being equal to or more favorable to the market maker whose crossed order was not modified than is the price of the other crossed market maker order (see at least Col. 13, lines 6-48).

**As to Claim 147**, Fraser teaches the step of:

after executing the non-market-maker order against the executable market maker order, automatically canceling or moving a price of at least one of the crossed market maker orders (see at least Col. 13, lines 6-48).

**As to Claim 153**, although Katz substantially teaches the invention of Claim 153, it does not explicitly teach the step of: by computer of the electronic trading system, computing

brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side. Fraser does teach the step of: by computer of the electronic trading system, computing brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side (see at least Col. 10, lines 11-35). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the features of Fraser with those of Katz as both inventions pertain to managing electronic auction trading of financial assets and the features of Fraser would provide incentive to market makers to bring liquidity to the market.

**As to Claim 156**, Katz teaches the step of: based at least in part on a determination by a computer of the electronic trading system that a price of a bid to buy order crosses the price of an offer to sell order, handling the crossed orders:

(a) if the evaluation determined that both crossed orders are from market makers or that both crossed orders are from non-market makers, executing a trade between the crossed orders at the price of the later order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26); and

(b) if the evaluation determined that the later crossed order is from a market maker and the earlier crossed order is from a non-market-maker, executing a trade between the crossed orders at the price of the earlier non-market-maker order (see at least Col. 6, line 64 through Col.

7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26).

Although Katz substantially teaches the invention of Claim 156, it does not explicitly teach (3) by computer of an electronic trading system, computing brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side. Fraser does teach by computer of an electronic trading system, computing brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side (see at least Col. 10, lines 11-35). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the features of Fraser with those of Katz as both inventions pertain to managing electronic auction trading of financial assets and the features of Fraser would provide incentive to market makers to bring liquidity to the market.

**As to Claim 164**, although Katz substantially teaches the invention of Claim 164, it does not explicitly teach the step of: by computer of the electronic trading system, computing brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side. Fraser does teach the step of: by computer of

the electronic trading system, computing brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side (see at least Col. 10, lines 11-35). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the features of Fraser with those of Katz as both inventions pertain to managing electronic auction trading of financial assets and the features of Fraser would provide incentive to market makers to bring liquidity to the market.

**As to Claim 176**, although Katz substantially teaches the invention of Claim 176, it does not explicitly teach the step of: by computer of the electronic trading system, computing brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side. Fraser does teach the step of: by computer of the electronic trading system, computing brokerage fees to traders for trades executed on the electronic trading system, the brokerage fee computation differing depending on whether each trader is on the aggressive side or passive side of a trade, the commission schedule arranged to charge passive-side brokerage fees to market makers whether on aggressive side or passive side (see at least Col. 10, lines 11-35). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the features of Fraser with those of Katz as both inventions pertain to managing electronic auction trading of financial assets and the features of Fraser would provide incentive to market makers to bring liquidity to the market.

**As to Claim 178**, Katz teaches the step of: by a computer of an electronic trading system, evaluating orders to trade an instrument to determine whether the orders are placed by market-makers, and evaluating received orders to determine whether a bid to buy order for the instrument crosses price with an offer to sell order for the instrument; based on a determination by a computer of the electronic trading system that a price of a bid to buy order crosses the price of an offer to sell order, and that the crossed orders are each from market makers, automatically taking at least one of the following actions (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; and Col. 10, line 62 through Col. 11, line 47):

(a) adjusting a price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and publishing the adjusted price order to the market for execution by non-market makers while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18);

(b) adjusting the price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and executing the adjusted price order against any matching orders from non-market maker traders, while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18); and

(c) starting a timer delaying execution of the crossed market maker orders against each other for a period of time, and if the crossed market maker orders remain matching or crossed at expiry of the timer, automatically executing the two market maker orders against each other (see

at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 179**, Katz teaches the step of: adjusting a price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and publishing the adjusted price order to the market for execution by non-market makers while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 180**, Katz teaches the step of: adjusting the price of at least one of the crossed market maker orders to match the price of the other crossed market maker order, and executing the adjusted price order against any matching orders from non-market maker traders, while not executing the market makers' orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 181**, Katz teaches the step of: based on a determination by a computer of the electronic trading system that a price of a bid crosses the price of an offer, and that the crossed bid and offer orders are each from market makers, automatically starting a timer delaying execution of the crossed market maker orders against each other for a period of time, and if the crossed market maker orders remain matching or crossed at expiry of the timer, automatically executing the two market maker orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 182**, Katz teaches the step of:

based on a determination by a computer of the electronic trading system that a price of a bid to buy order locks or crosses the price of an offer to sell order, and that the locked or crossed

orders are each from market makers, starting a timer delaying execution of the locked or crossed market maker orders against each other for a period of time; and if the crossed market maker orders remain matching at expiry of the timer, automatically executing the two market maker orders against each other (see at least Col. 9, line 9 through Col. 10, line 10; Col. 10, line 62 through Col. 11, line 47; and Col. 19, lines 1-18).

**As to Claim 183**, Katz teaches the step of: based at least in part on a determination by a computer of the electronic trading system that a price of a bid to buy order crosses the price of an offer to sell order, handling the crossed orders:

(a) on determination that both crossed orders are from market makers or that both crossed orders are from non-market makers, executing a trade between the crossed orders at the price of the later order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26);

(b) on determination that the later crossed order is from a market maker and the earlier crossed order is from a non-market-maker, executing a trade between the crossed orders at the price of the earlier non-market-maker order (see at least Col. 6, line 64 through Col. 7, line 56; Col. 8, line 66 through Col. 9, line 38; Col. 10, line 62 through Col. 11, line 47; and Col. 22, lines 1-26).

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **IRENE KANG** whose telephone number is (571)270-3611. The examiner can normally be reached on 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Kyle can be reached on (571)272-6746. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner, Art Unit 3695  
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